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Hunneman, Auke; Verhoef, Pieter; Sloot, Laurentius

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THE MODERATING ROLE OF SHOPPING TRIP TYPE IN STORE SATISFACTION FORMATION

Auke Hunneman*

BI Norwegian Business School
Nydalsveien 37, 0442 Oslo, Norway

Peter C. Verhoef

p.c.verhoef@rug.nl

University of Groningen
Nettelbosje 2, 9747 AE Groningen, The Netherlands

Laurens M. Sloot

l.m.sloot@rug.nl

University of Groningen
Nettelbosje 2, 9747 AE Groningen, The Netherlands
EFMI Business School
Groeneveld 2, 3744 ML Baarn, The Netherlands

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1. INTRODUCTION

In today's highly competitive retail environment, retailers seek to enhance store satisfaction through the development of store formats that appeal to consumers pursuing a particular shopping trip type (Bhatnagar & Ratchford, 2004; Fox, Montgomery, & Lodish, 2004). The retailer Tesco, for instance, employs four different store formats (Express, Metro, Superstores, and Extra) intended to appeal to consumers based on their respective situation and shopping goals. For example, Tesco Express, the convenience format, appeals to consumers who prefer a nearby store (a relatively stable consumer characteristic) and/or have time constraints (a more situational factor; see Park, Iyer, & Smith, 1989). Superstores, with their large and deep assortments, attract consumers who prefer one-stop shopping on regular shopping trips. Importantly, *perceptions* of retailers' marketing mixes (rather than the actual marketing mixes) significantly influence consumers' choices of store formats. Because store choice is at least partly driven by store satisfaction, retailers need to better understand the drivers of store satisfaction in order to develop store appeal and customer loyalty (e.g., Sirakay-Turk, Ekinci, & Martin, 2015).

The existing literature shows that several variables, such as household characteristics, may moderate the relationship between store attribute perceptions and store satisfaction. Because these variables may influence the importance of one or more store attributes, they provide opportunities for market segmentation (Ter Hofstede, Wedel, & Steenkamp, 2002) and targeted marketing. The shopping trip type is another variable that potentially moderates the effect of store attribute evaluations on store satisfaction. A rich literature on shopping behavior classifies shopping trips as either "major" or "fill-in" (Kahn & Schmittlein, 1989, 1992; Walters & Jamil, 2003). Major trips are regular trips, usually performed on a preferred day, that aim to purchase a household's more commonly used items. Fill-in trips, on the other hand, satisfy urgent needs, such as running out of a household staple like milk. Fill-in trips may also be used to make purchases for a less common situation, such as a special dinner. We divide fill-in trips into *regular* trips that satisfy "daily" needs

(replenishment) and *special* trips that arise from infrequent occasions like family dinners and birthday parties. This distinction between types of fill-in trips is new to the literature, and thus a major contribution of our study.

We build our work on indirect evidence in the existing literature that the shopping trip type moderates the effects of store attributes on store satisfaction. For example, Bell and Lattin (1998) showed that large-basket shoppers prefer EDLP stores because they offer lower overall prices across multiple categories. On the contrary, small-basket shoppers shop more opportunistically and exploit price variations (e.g., from promotional offers) over time. Of course, Bell and Lattin's (1998) research focused on objective prices rather than perceptions about price. However, we expect the same effect for price image, based on previous work showing a relation between actual prices and subjective price images (Mägi & Julander, 2005; Van Heerde, Gijsbrechts, & Pauwels, 2008). In the spirit of this work, we claim that much of the variation in how consumers evaluate store attributes stems from differences in shopping behavior. Despite the large number of store satisfaction studies, none have yet examined the moderating role of shopping trip type on store satisfaction. Specifically, this paper investigates how three shopping trip types (major, regular fill-in, and special fill-in) moderate the effect of store attribute perceptions on store satisfaction.

To accomplish this, our study used an extensive dataset, covering 2009-2014, that featured consumer evaluations of all grocery chains in the Netherlands, their specific store attribute evaluations, and the stated purpose of the shopping trips. In doing so, we contribute to the store image and shopping behavior literature in several important ways. First, we merge the two literatures by introducing the shopping trip type as a situational moderator of consumer satisfaction. Second, we advance the literature on shopping behavior by extending the typology of shopping trips with a new type: namely, fill-in trips that arise due to special occasions like family dinners and birthday parties. Finally, while previous studies have related the shopping trip undertaken to consumer demographics (e.g., Kim & Park, 1997), we do not assume such a one-to-one relationship between the two. Rather, we align with other research (e.g., Popkowski Leszczyc, Sinha, & Timmermans, 2000) in assuming that the same shopper may engage in different shopping trips depending on the occasion. For example, consumers may visit a primary grocery store for regular purchases on so-called major shopping trips

(Mägi, 2003), while they may visit other stores for fill-in purchases. Indeed, Popkowski Leszczyc and colleagues (2000) found that consumers prefer larger stores for major shopping trips and small neighborhood stores for regular fill-in trips. On this basis, we explore whether shopping trip variables have an effect beyond consumer demographics. We included both sets of variables in our model in the hopes of producing richer insights.

The rest of this paper is organized as follows: We first review the literature on store satisfaction formation and retail shopping behavior. Next, we develop our hypotheses and present the research methodology. Subsequently, we discuss the empirical results of our study. We end with a discussion of management implications and research limitations.

2. LITERATURE REVIEW

This article combines two retailing literatures that have, so far, mostly been developed in isolation. First, we utilize the work on consumer shopping behavior that has considered when and how often consumers shop for (fast-moving) goods (e.g., Kahn & Schmittlein, 1989, 1992). Second, we build upon the large literature on store satisfaction formation, which investigates how consumers develop overall attitudes toward and preferences for store formats based on perceptions about relevant store attributes (e.g., Sirohi, McLaughlin, & Wittink, 1998). This section reviews both literatures and points out how exactly our work unifies the two.

2.1. Shopping behavior

This section reviews the shopping behavior literature in line with the research objectives of the relevant studies in that literature. One research stream in this literature is mostly *descriptive* and investigates the types of shopping trips that consumers engage in based on trip frequency and spending behavior. This starts with the pioneering work of Kahn and Schmittlein (1989), who showed that consumers make two distinct types of shopping trips: major and fill-in. As noted before, major shopping trips are defined as regular trips, usually performed on a preferred day of the week rather than when there is an urgent need. Such trips aim to buy many of a household's more commonly used items, which generally requires a lot of time, effort, and money (Nordfalt, 2009). Fill-in trips satisfy

more urgent needs, such as when the household is out of milk or preparing for a novel situation, such as a special dinner. The main challenge of this literature is determining the type of trip based on variables such as the dollar amount spent on a trip, the time elapsed between trips, and consumer-generated measures, the latter of which offers insights into the purpose of the trip. With such measures, for example, Walters and Jamil (2003) extended Kahn and Schmittlein's (1989) typology by adding trips where consumers visit the store primarily for price specials (unfortunately, our data did not allow us to integrate this type; see the Limitations section). Likewise, our study employs self-reported measures in order to better understand how shopping tasks influence store attribute weights, which can only be assessed if we know consumers' exact purpose for visiting the store (Davis & Hodges, 2012).

In our study, we distinguish between three different shopping trips based on the known role of *situational factors* in consumer behavior (e.g., Bearden & Woodside, 1976; Wakefield & Inman, 2003). Bearden and Woodside (1976) showed that there is a major difference in attitude towards a brand depending on whether the brand is consumed in a social context or alone (the situational factor). Following this reasoning, Wakefield and Inman (2003) found that price sensitivity depends on the consumption occasion. For example, if consumers seek to derive pleasure and/or fun from the consumption of a product (a family dinner), consumers are less likely to be price sensitive. The same is true when the consumption takes place in a social setting compared to a non-social setting. These results even hold for products that primarily provide functional benefits, like groceries. Based on this, we distinguish between fill-in trips that have functional motives (replenishing stock) and those that have hedonic motives and/or lead to social consumption (e.g., birthday parties, family dinners). In doing so, we extend the shopping behavior literature by adding a new shopping trip type. Although Nordfalt (2009) already mentioned that fill-in trips can be due to less common situations such as special dinners, the literature has not yet formally distinguished between these different types of fill-in trips.

The second research stream in this literature relates the shopping trip type to several performance outcomes, such as the tendency to use coupons (Kahn & Schmittlein, 1989; Walters & Jamil, 2003); the amount of purchases in a particular product category (Kahn & Schmittlein, 1989);

the amount of unplanned purchases per store visit (Kollat & Willet, 1967; Nordfalt, 2009); shopping basket profitability (Walters & Jamil, 2003); the number of products purchased on promotion (Walters & Jamil, 2003), and store format choice (Bell & Lattin, 1998; Nilsson, Gärling, Marell, & Nordvall, 2015; Popkowski Leszczyc et al., 2000). We particularly draw on those studies exploring the effect of the shopping trip type on the choice of store format. Popkowski Leszczyc et al. (2000) found, for example, that the same consumers may visit different stores during the week depending on the purpose of the trip: regular trips to larger stores and fill-in trips to small neighborhood stores. Their results further indicated that the preference for a certain store on a particular shopping occasion depends on a preference for certain store attributes, namely store size and store location. Additionally, Thelen and Woodside (1997) found that a consumer retrieves different stores from memory depending on the relevant problem frame at hand. Hence, the preferences that consumers associate with daily shopping (e.g., “the store closest to home”) are likely to evoke a different set of stores than those associated with major shopping (e.g., “the store with the biggest assortment”). By extension, consumers may evaluate certain store attributes as relatively more important based on the type of shopping trip undertaken, which is consistent with the literature on satisfaction formation.

The present study builds on the literature linking shopping trip types to performance outcomes, particularly focusing on the effect of the shopping trip type on store satisfaction. Beyond the direct effects, we also expect the trip type to moderate the effects of store attribute evaluations on store satisfaction. We will now continue with a discussion of the literature on store satisfaction formation.

2.2. Satisfaction/Store image

Store image is a key driver of store satisfaction, as well as several other outcome variables such as store patronage, store loyalty, and share of wallet (Finn & Louviere, 1996; Hildebrandt, 1988). From a firm perspective, it is important that a marketing strategy emphasize the image attributes that the target segment considers the most important.

Many retail image studies acknowledge that consumers vary in terms of which store attributes they align with store patronage decisions. For example, Arnold, Oum, and Tigert (1983) found significantly different store attribute weights across different markets in the same country and across

cultures. Consequently, and as affirmed by Steenkamp and Wedel (1991), store image is a useful segmentation variable. Nonetheless, there are several other variables that moderate the relationship between store attribute evaluations and store satisfaction, including attribute resolvability (Slotegraaf & Inman, 2004), consumer confidence (Hunneman, Verhoef, & Sloot, 2015), and consumption goals (Mittal, Kumar, & Tsiros, 1999). The shopping trip type is a variable that has hitherto been ignored in the satisfaction formation literature, but likely has an effect.

The studies of Mittal, Kumar, and Tsiros (1999) and Slotegraaf and Inman (2004) provide a first indication that shopping trip types may shape the role of attribute weights in satisfaction formation. Given that different shopping trips have different consumption goals, it is logical to assume that the type of shopping trip will have an impact on the salience and weight of attributes in the satisfaction judgment. We found evidence for this in a study by Van Kenhove, De Wulf, and Van Waterschoot (1999), who showed that the importance assigned to particular store attributes differs across task definitions. When the task definition involves an urgent purchase, consumers value proximity to the store, quick service, and stock availability. When buying in large quantities, consumers place importance on low prices and stock availability. In the case of purchasing material for a difficult job, consumers expected the store to offer good (after-sales) service, a wide product range, and high-quality products. For regular purchases, consumers rated store proximity, low prices, and sufficient stock as most important.

The frequency of consumers' exposure to store attributes is another potential cause for changes in attribute salience (Mittal et al., 1999; Oliver, 1997). Since attitudes are learned, store image is dependent on an individual's experience with the store (James, Durand, & Dreves, 1976). On this point, Desai and Talukdar (2003) developed a product-price saliency framework to examine how consumers form an overall store price image. The authors found that products with higher unit prices and a higher purchase frequency are more salient and therefore contribute more to price image. Similarly, one could argue that because fill-in trips are conducted more frequently (Kahn & Schmittlein, 1989) and usually at HiLo stores (Bell & Lattin, 1998), the attributes of these stores will become more important to fill-in shoppers. Hence, the frequent exposure to price-related messages may make the price attribute more salient and thereby increase its importance in store evaluations.

-INSERT TABLE 1 ABOUT HERE-

3. CONCEPTUAL MODEL AND HYPOTHESES DEVELOPMENT

This section develops a conceptual framework and set of hypotheses that we aim to test in our empirical study. Following Sirohi et al. (1998) and Gómez, McLaughlin, and Wittink (2004), our conceptual framework assumes that store attribute evaluations drive a consumer's overall satisfaction with the store. Previous store image research has identified several relevant store attributes (Ailawadi & Keller, 2004), which can be conveniently split into benefit-related factors ("what you get") and cost-related factors ("what you pay for"). Following this logic, we identify price and convenience as cost-related factors and service as a benefit-related factor. This classification closely mirrors the fixed and variable costs distinction proposed by Bell, Ho, and Tang (1998) who use price as a measure for the variable costs associated with a store visit. Service and location are costs inherent with visiting a store and thus fixed costs.

In addition to identifying relevant store attributes, we need to define the shopping trip variables. The shopping behavior literature has distinguished between major shopping trips and fill-in trips (Kahn & Schmittlein, 1989). On such trips, shoppers accomplish specific tasks or goals, which determine the value that consumers derive from their shopping experiences. Besides the above-mentioned utilitarian motives, shoppers can also have more hedonic motives if they associate shopping with fun, pleasure, and other positive emotions (Davis & Hodges, 2012; Stoel et al., 2004). Given that we study satisfaction formation in the grocery context, we focus on shopping trips with mostly utilitarian motives. This is in line with previous research showing that hedonic shopping motivations are more likely for purchases of a hedonic nature, which is clearly not the case for fast-moving consumer goods (Arnold & Reynolds, 2003). Specifically, we distinguish between three types of shopping trips: 1) major weekly trips aimed at obtaining a household's regularly bought items, 2) regular fill-in trips satisfying a household's more urgent needs, and 3) shopping for special occasions like a family dinner, holidays or someone's birthday. The latter type has previously been considered

part of the fill-in trips (Nordfalt, 2009). We included all three shopping trip types in our conceptual model and developed hypotheses for each.

Beyond the moderating role of the shopping trip, we also accounted for the role of consumer characteristics (e.g., household size, age, and income) and store characteristics (e.g., service vs. price positioning) in satisfaction formation. This is consistent with previous research (see, e.g., Cooil, Keiningham, Aksoy, & Hsu, 2007). In the next section, we present our hypotheses in accordance with the conceptual model presented in Figure 1.

-INSERT FIGURE 1 ABOUT HERE-

3.1. Moderating role of the shopping trip type on the importance of price

In this study, the ‘price’ attribute encompasses not only low prices, but also attractive offers and the availability of cheap products. Hence, this section discusses the moderating role of the shopping trip type on consumers’ responses to both regular prices and promotions. Past research hints at several effects related to these two marketing instruments.

Firstly, Bell and Lattin (1998) showed that large-basket shoppers prefer EDLP stores compared to those with a HiLo format. Infrequent shopping makes large-basket shoppers less able to benefit from (usually unpredictable) price promotions than small-basket shoppers, who shop more frequently (Bell & Lattin, 1998). Similarly, Bell et al. (1998) found that the size of the shopping basket exerts an effect on consumers’ total shopping costs. The underlying idea is that stores with high fixed costs (e.g., those at a distant location or with a high service level), but low variable costs (i.e., low prices) become more attractive as basket size increases. This is because the total shopping costs do not increase so much as baskets get larger. Consequently, large-basket shoppers choose a store with lower (overall) price levels.

Another possible effect relates to the type of products bought at each trip. Fill-in trips often aim at replenishing a consumer’s inventory of certain product categories, such as perishables, whereas major trips are more likely to evoke purchases in other categories (e.g., laundry detergents). Past

research shows that consumers have higher price sensitivity for products that can be stockpiled (Narasimhan, Neslin, & Sen, 1996). We expect that fill-in shoppers are less price sensitive than major shoppers because perishables cannot be stockpiled.

Relatedly, there is ample evidence that consumers vary in their promotion sensitivity across shopping trip types. For example, Kahn and Schmittlein (1992) and Walters and Jamil (2003) argued that large-basket shoppers have bigger incentives to engage in a *promotion search* prior to the shopping trip. Because the scale of major trips offers higher levels of absolute savings compared to fill-in trips, large-basket shoppers benefit from studying pricing information before their trip (Walters & Jamil, 2003). Consequently, we would expect to see a significant effect of *out of store* promotions (i.e., coupons and features) on satisfaction for these consumers. In line with this, Kahn and Schmittlein (1992) found that major shoppers are more likely to redeem manufacturer coupons. Walters and Jamil (2003), however, did not find any difference in redemption behavior between major and fill-in shoppers. Likewise, Walters and Jamil (2003) did not find any significant relationship between basket size and the amount of featured product purchases, whereas Kahn and Schmittlein (1992) found that fill-in shoppers are more likely to purchase featured products. The latter authors argued that features may cause consumers to visit the store on a fill-in trip in order to benefit from a price deal.

Little is known about the role of price on satisfaction with regard to special fill-in trips. Since special fill-in trips frequently have large basket sizes, one could argue that consumers will be more price sensitive. Additionally, higher levels of social and financial risk can be associated with shopping for others (Mattson, 1982). In order to reduce this risk, consumers may engage in extensive information search and an elaborate and careful evaluation of alternatives (Dowling & Staelin, 1994). Given that birthdays, holidays, and family dinners are usually planned in advance, consumers can gather (price) information about different alternative options and subsequently purchase the product when and where (i.e., at which retailer) they can get the best deal. This would imply that price plays a larger role in satisfaction formation for special fill-in trips. At the same time, special occasion shoppers may also care more about their party guests' specific preferences (e.g., for a certain

beer). As noted, consumers tend to care less about price when the consumption takes place in a social setting compared to a non-social setting. Party hosts may also want to impress their guests with high-quality products and national brands. Consequently, price may have a smaller impact (Wakefield & Inman, 2003).

Although there are mixed arguments and findings on the role of price, the literature largely suggests that the importance of the “price” attribute differs significantly between major and fill-in shopping trips. Based on the above mechanisms, we expect major shoppers to be more responsive to price than fill-in shoppers. We furthermore hypothesize that price plays a larger role in satisfaction formation for special fill-in trips, as increased planning time and larger basket sizes are likely to increase the attractiveness of finding good deals.

H1a: The effect of price on customer satisfaction is stronger for consumers visiting a store on a major shopping trip.

H1b: The effect of price on customer satisfaction is weaker for consumers visiting a store on a fill-in shopping trip.

H1c: The effect of price on customer satisfaction is larger for consumers visiting a store on a special fill-in trip.

3.2. Moderating role of the shopping trip type on the importance of convenience

In this study, the “convenience” attribute not only includes the travel time or distance to the store, but also the presence of other stores in the same neighborhood. These alternative stores in the focal store’s surroundings offer opportunities for multipurpose shopping, which may reduce the total costs of a shopping trip. We consider both aspects of convenience in this section.

Bell et al. (1998) argued that consumers want to minimize the total costs associated with each shopping trip—and location is an important component of their fixed costs. Consequently, consumers will not visit an inconvenient or distant location for small-basket fill-in trips (Popkowski Leszczyc et al., 2000). Conversely, a consumer is more likely to use a car when purchasing many items. Traveling

by car would significantly reduce the travel time to the store and thus increase the likelihood of visiting a distant store on a major shopping trip (Bhatnagar & Ratchford, 2004). Following this logic, Van Kenhove et al. (1999) indeed found that when the task definition involves an urgent purchase, consumers value proximity to the store. Similarly, fill-in trips are more likely to be of the utilitarian type—and in such situations, functional motives like convenience are more likely to be important (Davis & Hodges, 2012). Further, we expect travel distance to be more important for regular fill-in trips than for fill-in trips related to special occasions. These latter trips are more likely due to hedonic shopping motivations, which may reduce a consumer's sensitivity to shopping costs, including those associated with traveling (Wakefield & Inman, 2003).

By contrast, large-basket shoppers gain more from one-stop shopping (Messinger & Narasimhan, 1997) and thus place less value on the presence of other stores. They are more likely to focus on a single store where they can efficiently purchase their desired products. Beyond that, large-basket consumers are more likely to visit a store farther away because they can spread the fixed travel costs over a larger number of items.

In sum, the shopping trip type may increase or decrease the importance of convenience in satisfaction formation depending on which specific dimension of convenience construct we consider. We propose the following hypotheses:

H2a: The effect of convenience on customer satisfaction is smaller for consumers visiting a store on a major shopping trip.

H2b: The effect of convenience on customer satisfaction is larger for consumers visiting a store on a fill-in-shopping trip.

H2c: The effect of convenience on customer satisfaction is smaller for consumers visiting a store on a special fill-in trip.

3.3. Moderating role of the shopping trip type on the importance of service

This section considers the importance of service in a consumer's satisfaction judgment. We define service broadly in terms of the store's assortment size, the friendliness and knowledge of its personnel, the quality of its products, fast checkout, long opening hours, parking space availability, and tidiness.

Large-basket shoppers feel more attracted to high fixed-cost stores, which tend to be farther away and have a higher overall quality level (Bell et al., 1998). This is consistent with the findings of Briesch, Chintagunta, and Fox (2009), who noted that consumers trade off convenience and assortment size in their store choice decisions. Specifically, the less a household values assortment, the more it values convenience, and vice versa. Consumers are thus willing to travel farther to the store, as long as the higher service level compensates for the longer travel time. Similarly, Messinger and Narisham (1997) showed that when consumers want to buy from a large number of categories, they prefer stores with larger assortments and better opportunities for one-stop shopping. Bhatnagar and Ratchford (2004) extended this finding, showing that shoppers prefer stores with bigger assortments, even if they are only interested in buying large quantities of one product category.

Furthermore, the nature of regular fill-in shopping trips (e.g., inventory replenishment) evokes more functional shopping motives than that of major shopping trips. Consequently, one would expect that consumers value service-related attributes less on fill-in trips than on major shopping trips (Davis & Hodges, 2012). Taken together, this literature suggests that service is more important to large-basket shoppers than to regular fill-in shoppers.

Meanwhile, consumers on special fill-in trips often buy in large quantities and thus place more value on broader assortments. Beyond that, these consumers might value special or high-quality products that can be used to impress their guests (e.g., Wakefield & Inman, 2004). As such, we expect that consumers will value service more for special fill-in trips.

In sum, we hypothesize the following relationships:

H3a: The effect of service on customer satisfaction is larger for consumers visiting a store on a major shopping trip.

H3b: The effect of service on customer satisfaction is smaller for consumers visiting a store on a fill-in shopping trip.

H3c: The effect of service on customer satisfaction is larger for consumers visiting a store on a special fill-in trip.

4. RESEARCH METHODOLOGY

We tested the hypotheses using data from a monthly survey, collected from November 2009 through December 2014, that was distributed to a representative sample of Dutch grocery shoppers. Every month, about 220 individuals who were responsible for their household's grocery shopping answered questions related to their motivations for shopping at the stores they frequently visit. They also evaluated each of these stores on certain attributes, as well as their overall satisfaction with these stores. The surveys were conducted for the Shopper Monitor of EFMI, a Dutch academic research institute that studies the shopping behavior and perceptions of Dutch grocery shoppers¹.

It is important to note that we used repeated cross-sectional data (i.e., the sample composition changed each month) rather than tracked a single panel of consumers over time. Despite different households participating in the survey each month, the samples showed little variation in (average) household characteristics over time. This means that the variables of household size, age, and income remained relatively stable across the data collection period.

Table 2 contains the definitions of some key variables used in this study, namely the shopping trip type, store attribute evaluations, and customer satisfaction. The table shows that customer satisfaction was measured on a single item asking respondents how they evaluate the grocery stores that they visited in the last month; respondents used a 10-point Likert scale ranging from 1 (extremely dissatisfied) to 10 (extremely satisfied). Similarly, respondents evaluated the grocery store on 17 attributes covering questions regarding the store's price level, assortment size, personnel, service quality, etc. The shopping trip type was measured by means of three dichotomous variables indicating whether participants visited the store for weekly, large-basket trips (0=no, 1=yes), for fill-in trips (0=no, 1=yes), or to make purchases for special occasions like birthdays, holidays, or dinners with guests (0=no, 1=yes). Additionally, to account for consumer heterogeneity, the survey collected demographic data related to respondents' age, household size, and income level. Our inclusion of

¹ The data used for this study are similar to those used by Hunneman et al. (2015), but the current study applied different focal variables (shopping trip types). Additionally, Hunneman et al. (2015) used data from November 2009-July 2012, whereas the current study used data from November 2009-December 2014.

sociodemographics as control variables is consistent with some key articles in retailing (e.g., Ailawadi, Neslin, & Gedenk, 2001).

-INSERT TABLE 2 ABOUT HERE-

4.1. Store attributes

We analyzed the store attribute data using principal components analysis with a Varimax rotation. This analysis aimed to reduce the original set of 17 store attribute evaluations to a more manageable set of (uncorrelated) composite measures (i.e., factor scores) based on correlations between the respondents' evaluations of these attributes. As outlined in the conceptual framework, we expected three underlying dimensions: price, service, and convenience. Table 3 shows that we indeed found support for a three-factor solution: The three factors together explain 61 percent of the variance in the original items.

-INSERT TABLE 3 ABOUT HERE-

We interpreted the obtained factor solution based on the factor loading patterns observed in Table 3. To increase the table's readability, we omitted loadings smaller than .5. One factor, "price", loaded items that refer to low prices and attractive offers. The second factor, "service", loaded items such as friendly and knowledgeable personnel, the quality and variety of products, parking space availability, and store tidiness. The third factor, "convenience", loaded items such as travel distance to the focal store and the presence of alternative stores. These findings paralleled those in the literature (Ailawadi & Keller, 2004) and supported our conceptual model. Note that the findings are similar to those reported in Hunneman et al. (2015), suggesting that the factors do not change even as the data encompass a longer time period.

4.2. Model Development

We employed a panel data model to test our hypotheses, as it allowed us to account for differences in parameters across stores and over time. The dependent variable in our model was customer satisfaction. The explanatory variables were the principal components measuring consumers' evaluations of each store's price, service, and convenience. The control variables included the store's format (service oriented or price oriented) along with consumer characteristics like age, household size and income level. Moreover, we controlled for whether the store at which purchases are made was the consumer's primary chain for groceries or not. We allowed the slope parameters for the three store attribute factors to vary across chains. The shopping trip type and store format explain the variation in these regression coefficients. Moreover, in line with the local marketing literature, we expected consumer characteristics to moderate the relationships between store attribute evaluations and customer satisfaction. For example, Hoch, Kim, Montgomery, and Rossi (1995) found that demographic variables explain a significant part of the variation in store-level price elasticities.

Finally, we accounted for year- and month-specific effects through the inclusion of fixed effects. Such effects may be present due to differences in positioning, competition, and/or the quality of the chain's management. Consequently, the full regression equation took the following form:

$$\begin{aligned}
SAT_{ijt} = & \beta_0 + \beta_{1j}SERV_{ijt} + \beta_{2j}PRICE_{ijt} + \beta_{3j}CONV_{ijt} \\
& + \beta_4FILTRIP_{ijt} + \beta_5MAJTRIP_{ijt} + \beta_6SPECTRIP_{ijt} + \beta_7AGE_{it} + \beta_8INC_{it} \\
& + \beta_9HHS_{it} + \sum_{k=1}^{T-1} \varphi_k I_{kijt} + \sum_{l=1}^{L-1} \varphi_l I_{lijt} + \epsilon_{ijt}
\end{aligned} \tag{1}$$

in which,

$$\beta_0 = \gamma_{00} \tag{1a}$$

$$\begin{aligned}
\beta_{kj} = & \gamma_{k0} + \gamma_{k1}FILTRIP_{ijt} + \gamma_{k2}MAJTRIP_{ijt} + \gamma_{k3}SPECTRIP_{ijt} + \gamma_{k4}SVC_j + \gamma_{k5}AGE_{it} \\
& + \gamma_{k6}INC_{it} + \gamma_{k7}HHS_{it} + v_{kt}
\end{aligned} \tag{1b}$$

where SAT_{ijt} is respondent i 's ($i=1, \dots, I_t$) overall satisfaction with chain j ($j=1, \dots, 30$) at time t ($t = 1, \dots, 12$); $SERV_{ijt}$, $PRICE_{ijt}$, $CONV_{ijt}$ are respondent i 's factor scores at time t for service, price, and convenience, respectively; $FILTRIP_{ijt}$, $MAJTRIP_{ijt}$, $SPECTRIP_{ijt}$ indicate with 1 (yes) or 0 (no) whether respondent i 's visit to chain j at time t was a regular fill-in trip, a major shopping trip, or a trip made for a special occasion, respectively; AGE_{it} , INC_{it} , HHS_{it} are respondent i 's background characteristics measuring his/her age, income and household size at time t , respectively; the I_{kijt} 's are indicator variables representing the month: 1 if the observation is in month k ($k = 1, \dots, 12$), 0 otherwise; I_{lijt} indicates the year to which an observation belongs: 1 if the observation is in year l , 0 otherwise and SVC_j is a dummy variable indicating whether chain j is a service chain (1) or not (0). We allowed the slope parameters for the three attribute factors to vary across chains. Each parameter β_{kj} ($k = 1, \dots, 3$) is the sum of a general mean, the deterministic effects of a set of explanatory variables and a normally distributed error term with mean zero and constant variance ($v_{kt} \sim N(0, \sigma_k^2)$).

In Equation (1), we included the shopping trip variables as indicator variables that can take either the value 0 or 1. Consequently, γ_{k0} is the mean effect of the focal variables (price, service, or convenience) for all other types of shopping trips (i.e., trips that cannot be classified as major, fill-in, or special fill-in trips). Hence, the parameter estimates for the interaction effects (i.e., γ_{k1} , γ_{k2} , and γ_{k3}) between the store attributes and the shopping trip type variables should be interpreted as deviations from this mean; they can be either positive or negative. This implies that the results should be read as follows: If we find a significant positive coefficient for the interaction between service and major shopping trip (i.e., $\gamma_{13} > 0$), then service is more important for major shopping trips *compared to all other trips*.

5. EMPIRICAL RESULTS

Table 4 shows the parameter estimates of the model specified in Equation 1. We can assess the model's fit by looking at the R square, calculated as the squared correlation coefficient between the observed and predicted values. We obtained a value of .67, which means that the model has a good fit and explains approximately two-thirds of the variance in customer satisfaction. The remainder of this

section will discuss the individual effects of each explanatory variable on satisfaction. We first focus on the main effects of the individual store attributes and each shopping trip type variable on customer satisfaction. Next, we ascertain whether the empirical findings align with our theoretical predictions regarding the potential moderating effects of shopping trip type.

-INSERT TABLE 4 ABOUT HERE-

5.1. Main Effects

The significantly positive parameter estimates for the three store attributes (price, service, and convenience) indicate that store evaluations improved when customers were satisfied with these attributes. Following previous research (Anderson & Mittal, 2000; Gómez et al., 2004; Hunneman et al., 2015), we can thus classify all these attributes as satisfaction-enhancing attributes. We further found that price and service had the largest impact on customer satisfaction. This finding accords with that of Baker, Parasuraman, Grewal, and Voss (2002), who uncovered that a customer's shopping value assessment includes a balance between monetary price and merchandise quality, while being less based on the perceived shopping costs, including those related to traveling to the store.

With respect to the three shopping trip variables, the results show that consumers' overall evaluations of the store were lower when they used that store for special fill-in trips. This finding may be explained by the higher social and financial risk that consumers usually perceive when buying for others. Consequently, consumers are likely to raise their expectations regarding store attributes (including return policies, the helpfulness of sales people, and the quality of the merchandise), which then negatively affects satisfaction.

5.2. Moderator Effects

The main purpose of this study was to see whether the shopping trip type moderates the relationship between store attribute evaluations and customer satisfaction. Before testing our hypotheses, we first explored the additional explanatory power of interaction effects. When we added the interaction effects to a model with only main effects, both the R^2 and adjusted R^2 marginally increased, but he

model fit significantly increased ($p < .05$). However, given the small increase in the model's explanatory power, the interaction effects were not substantial, though some of them were significant. Indeed, when we plotted the interaction effects, the effect sizes were small.² The next subsections discuss the results for the moderator effects and whether they align with our expectations. If not, we offer possible alternative explanations for our findings.

5.3. Moderating role of the shopping trip type on the importance of price

Our findings suggest that consumers find the price attribute more important for fill-in trips ($\beta = .002; p < .05$). This finding contradicts hypothesis 1a, which claimed that major shoppers have more to gain from lower prices and price promotions, and thus value 'price' more than fill-in shoppers. A possible explanation for this finding is that fill-in shoppers may go to the store exactly because one of the desired products is on promotion. Such an effect would align with the findings of Kahn and Schmittlein (1992), who noted that fill-in shoppers are more likely to visit a store to purchase featured products. Similarly, Walters and Jamil (2003) identified a segment of so-called cherry pickers who visit the store primarily to benefit from price deals. Hence, we argue that price may become more important for fill-in trips just because these trips are initiated due to the price offer.

We further found that price is more important for special fill-in trips ($\beta = .006; p < .001$), which confirms hypothesis 1c. This may be because of a higher level of social and financial risk associated with shopping for others (Mattson, 1982). In order to reduce this risk, consumers may engage in extensive information search behavior, as well as an elaborate and careful evaluation of alternatives (Dowling & Staelin, 1994).

-INSERT FIGURES 2-6 ABOUT HERE-

5.4. Moderating role of the shopping trip type on the importance of convenience

² The plotted interaction graphs are not reported here, but can be requested from the corresponding author.

In line with hypothesis H2a, the findings confirmed that convenience is more important for regular fill-in trips ($\beta = .002; p < .05$). The rationale for this effect is that consumers want to limit their total shopping costs. Following this logic, small-basket shoppers visit nearby stores in order to keep their (fixed) shopping costs low. In addition, regular fill-in trips are typically of a utilitarian nature, which makes functional attributes like proximity to the store more important for such trips. Major shoppers, on the other hand, benefit more from going to a store farther away with a potentially larger assortment. Additionally, large-basket shoppers are more likely to travel by car and thus can reduce their travel costs significantly. Hence, we hypothesized that convenience would be less important for major trips. We did not find such an effect ($\beta = -.001; p > .05$). Neither did we find support for hypothesis H2c, which posited that convenience would be less important for special fill-in trips due to their hedonic nature. Rather, the interaction effect between special fill-in trip and convenience was not significantly different from zero ($\beta = .001; p > .05$). These non-significant effects may be due to the two-sided nature of the convenience attribute. The distance-related dimension of convenience—namely the travel costs associated with going to the store—seemed to prevail over the dimension related to the presence of alternative stores. Distance is a cost, whereas opportunities for comparative and multipurpose shopping represent a benefit, especially when one has to make purchases for special occasions. If these two effects cancel each other out, we expect to find no effect for convenience. To investigate this possible explanation, we also ran an analysis with only the distance component of convenience. The findings were very similar to the ones reported here. It appears that distance itself is more important for regular fill-in trips, whereas it does not matter for major trips and special fill-in trips.

5.5. Moderating role of the shopping trip type on the importance of service

The findings show that service is less important for fill-in trips ($\beta = -.003; p < .001$), which is consistent with hypothesis 3b. In line with previous research, fill-in shopping trips may result from functional shopping motives (i.e., inventory replenishment), which renders service-related attributes less important. However, contrary to our expectations, we did not find evidence that service becomes more important for major shopping trips. Instead, we found that major shoppers considered service

less important ($\beta = -.002; p < .05$). This result can be explained by Nordfalt (2009)'s finding that major shopping trips may eventually entail habit formation. Specifically, he showed that the repetitive nature of shopping for low-involvement goods like groceries may lead to a state in which consumers buy the same items in the same order and under the same circumstances without paying much attention to the environment. If this is the case, several service attributes (e.g., friendliness of personnel, tidiness of the store, and store attractiveness) may become less important during major trips and decrease the importance of the service attribute as a whole. Lastly, we did not find any significant interaction between special fill-in trips and the service attribute ($\beta = .001; p > .05$), which means, contrary to hypothesis 3c that service is not more important for special fill-in trips.

5.6. Control Variables

In line with previous studies (see, e.g., Pan & Zinkhan, 2006), we also found that individual difference variables moderated the relationship between store attribute evaluations and overall customer satisfaction. Specifically, our results indicate that larger households ascribe more importance to convenience than smaller households ($\beta = .001; p < .05$). This finding supports the time allocation theory advocated by Becker (1965), who predicted that consumers perceive disutility from traveling, due to transportation and opportunity costs, and are therefore more likely to visit stores closer to their residence. These opportunity costs are likely to be higher for larger households, which have larger demands than smaller households and thus visit the store more frequently. Similarly, we found that price is more important for older consumers ($\beta = .0002; p < .001$), which corroborates previous research showing that elderly consumers are more price sensitive due to their lower opportunity costs of time (Hoch et al., 1995).

6. DISCUSSION

6.1. Conclusions

-INSERT TABLE 5 ABOUT HERE-

This study examined the moderating role of shopping trip types on the relationship between store attributes and satisfaction formation. To do so, we distinguished between three shopping trip types: major trips and two types of fill-in trips—regular (e.g., to replenish “daily” stock) and special (e.g., for family dinners and birthday parties). The formal separation of these two fill-in trip types is new to the literature and thus a major contribution of our study.

Table 5 lists the most important findings of this study. We indeed found that the importance of store attributes differs depending on the type of shopping trip undertaken. For example, service exerted an important effect on satisfaction, but this effect was weaker for major trips than for either fill-in trip type. Similarly, the location of the store was more important for fill-in trips than for any other shopping trip type. Price, meanwhile, was a more important attribute for fill-in trips related to special occasions like birthdays and family dinners. In the next section, we elaborate on our study’s practical implications.

6.2. Practical implications

We found some evidence that the effect of store attributes on customer satisfaction formation differs depending on the type of shopping trip undertaken. This finding has several potential implications for retail managers, who may use these results to define and target specific segments of shoppers who engage in specific types of shopping trips. For instance, location is a more important factor in satisfying customers on regular fill-in trips, whereas price is a more important factor in satisfying customers on special fill-in trips.

We must note the difficulty of implementing a ‘one size fits all’ approach: Even in a single store, shoppers vary greatly in their needs and shopping trip approach, even month to month. One solution is for retailers to develop multiple formats to serve different needs. For example, in the Netherlands, market leader Albert Heijn offers several store formats in order to serve multiple shopping trip segments. They utilize a supermarket format for regular weekly purchases, but also developed “AH to Go” as a convenience format for busy shoppers and “AH XL” for special purchases and very large shopping trips. Other major retailers in Europe, such as Tesco, Sainsbury, Delhaize and Edeka, follow

the same kind of multi-format strategy. In order to best satisfy customers in these specific formats, retailers are advised to attract customers with the same shopping goals (i.e., AH to Go offers a strong location and a focus on fill-in trips). For more general formats, which encompass a broad array of customers and needs, retailers should perform on all relevant dimensions (service, price, location) in order to satisfy all customer groups.

6.3. Research limitations and directions for future research

Our empirical study has several limitations that provide excellent opportunities for further research.

First, we analyzed data from just one country (i.e., the Netherlands). Arnold, Oum, and Tigert (1983) and Ter Hofstede et al. (2002) have shown that store attribute weights differ across countries. Thus, future research could investigate whether these differences stem from variations in shopping habits (e.g., differences in shopping trip types) across countries. If that is the case, retailers could possibly engage in behavioral segmentation across nations.

Second, we analyzed repeated cross-sections of different shoppers rather than followed individual shoppers over time. More advanced models are available for the analysis of repeated cross-sections (Van Oest & Franses, 2005). Further research is necessary to investigate if these methods can be used for these specific data.

Third, the convenience attribute we adopted captures two dimensions that are not necessarily highly correlated: We found a .33 correlation between the dimension measuring location and that measuring the presence of other stores. Even though the Principal Components Analysis clearly indicated that these two items form one factor, additional research could investigate the (content) validity of these two dimensions in more detail. Additionally, future studies could extend our set of control variables to include, for example, whether a consumer is fully employed.

Fourth, we may have defined our shopping trip variables too broadly. While we included stock replenishment (“regular”) and special occasions (“special”) in our definition of fill-in trips, we did not consider alternative options, such as consumers visiting a store due to an attractive offer (cherry picking). Hence, we strongly recommend more in-depth research on shopping trip types that supplements the typology advanced in Kahn and Schmittlein’s (1989) pioneering work.

Fifth, the theoretical arguments for several of our hypotheses assume a relationship between the shopping trip type and basket size. Ideally, one would empirically test the effect of the shopping trip type on basket sizes. However, our dataset did not contain a variable measuring the basket sizes for each of the grocery chains. Thus, future research needs to investigate whether basket size indeed explains some of the effects.

Sixth, despite the statistical significance of the interaction effects, the effect sizes of these interactions were rather low, indicating that the interactions led to relatively small changes in satisfaction. Thus, managers should be cautious when applying the results of our study, as the significant interactions were not substantial.

Seventh, the retailing literature has well established that satisfaction can lead to customer loyalty. Hence, a logical next step would be to relate shopping trips to a customer's share of wallet. Future research could investigate whether customers distribute their grocery expenditures over several grocery store formats (hypermarket, regular supermarket, and convenience stores) depending on the shopping trip type. If so, a retail chain could increase the share of wallet obtained from individual consumers by developing a portfolio of store formats positioned around different shopping occasions.

Finally, future work could examine product attributes beyond price, service, and convenience, such as social responsibility and sustainability.

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TABLES AND FIGURES

Table 1: Overview of relevant literature

Dependent variable	Key references	Moderator variable
<i>Panel A: Shopping trip – performance literature</i>		
Use of coupons	Kahn & Schmittlein, 1989 Walters & Jamil, 2003	
Amount of purchases in product category	Kahn & Schmittlein, 1989	
Amount of unplanned purchases	Kollat & Willet, 1967 Nordfalt, 2009	
Shopping basket profitability	Walters & Jamil, 2003	
Number of purchases of promoted products	Walters & Jamil, 2003	
Store format choice	Bell & Lattin, 1998; Nilsson, Gärling, Marell, & Nordvall, 2015; Popkoswki Leszczyc, Sinha, & Timmermans, 2000	
<i>Panel B: Satisfaction formation literature</i>		
Product and service satisfaction	Mittal, Kumar, & Tsiros, 1999	Consumption goals
Product satisfaction	Slotegraaf & Inman, 2004	Attribute resolvability
Store satisfaction	Ter Hofstede, Wedel, & Steenkamp, 2002	Spatial proximity
Store satisfaction	Hunneman, Verhoef, & Sloot, 2015	Consumer confidence
Store Satisfaction	This Study	Shopping Trip

Table 2: Definitions of some key constructs used in this study

Construct	Questions	Scale
Shopping trip type	<ul style="list-style-type: none">• Major trip: Do you use this grocery store usually for the major “weekly” groceries?• Fill-in trip: Do you use this grocery store usually for the daily fill-in trips?• Special fill-in trip: Do you use this grocery store usually for purchases related to special occasions (for example, birthdays, holidays or dinners with guests)?	Dichotomous (0=no; 1=yes)
Customer satisfaction	If I would have to assign a grade from 1 (very bad) to 10 (excellent) to the overall performance of the following supermarkets, I would give them:	10-point scale
Store attributes	<p>How would you evaluate the following supermarkets on the dimensions below on a scale from 1 (very bad) to 10 (excellent):</p> <ul style="list-style-type: none">• Low prices• Attractive offers• Product quality• Customer friendly personnel• Good supply of fresh products• Large assortment• Long opening hours• Store attractiveness• Fast checkout• Good supply of additional services• (copy machine, postcards and tickets, photo service, etc)• Child friendliness of the store• Tidy store• Spacious store• Knowledgeable personnel• Much attention for new products• The store is nearby• Sufficient supply of other stores close to the focal store	10-point scale

Table 3: Store attribute factors and corresponding survey elements

Survey elements – specific attributes	Factor loadings			
	Price	Service	Convenience	Alpha if deleted
Low prices	.871			
Attractive offers	.641			
Product quality		.675		.933
Customer friendly personnel		.746		.931
Good supply of fresh products		.715		.931
Large assortment		.800		.929
Long opening hours		.580		.934
Store attractiveness		.864		.927
Fast checkout		.722		.932
Good supply of additional services (copy machine, postcards and tickets, photo service, etc)		.628		.941
Child friendliness of the store		.674		.934
Tidy store		.854		.930
Spacious store		.766		.930
Knowledgeable personnel		.765		.930
Much attention for new products		.767		.930
The store is nearby			.744	
Sufficient supply of other stores close to the focal store			.715	
Reliability alpha or correlation in case of two items	.640	.936	.368	

Table 4: Parameter estimates of the customer satisfaction model

Variable	Parameter	Std.error	t value	Sign.
Intercept	7.434	0.033	223.08	***
Major trip	-0.007	0.012	-0.58	
Fill-in trip	-0.009	0.007	-1.22	
Special fill-in trip	-0.017	0.007	-2.24	*
Service	0.060	0.004	14.82	***
Price	0.074	0.004	20.63	***
Convenience	0.022	0.003	6.82	***
Age	-0.002	0.0003	-7.90	***
Household size	-0.023	0.005	-4.90	***
Income	0.014	0.003	5.60	***
Service chain	0.003	0.010	0.34	
Price x Major trip	-0.001	0.001	-0.58	
Service x Major trip	-0.002	0.001	-2.13	*
Convenience x Major trip	-0.001	0.001	-0.95	
Price x Fill-in trip	0.002	0.001	2.58	*
Service x Fill-in trip	-0.003	0.001	-3.63	***
Convenience x Fill-in trip	0.002	0.001	2.57	*
Price x Special fill-in trip	0.006	0.001	7.80	***
Convenience x Special fill-in trip	0.001	0.001	1.63	
Service x Special fill-in trip	0.001	0.001	0.74	
Service x Age	-0.0002	0.00003	-8.47	***
Price x Age	0.0002	0.00003	8.62	***
Convenience x Age	-0.0001	0.00003	-1.81	
Service x Household size	-0.001	0.0004	-2.06	*
Price x Household size	-0.001	0.0004	-3.72	***
Convenience x Household size	0.001	0.0004	2.20	*
Service x Income	-0.001	0.0002	-3.69	***
Price x Income	0.001	0.0002	4.87	***
Convenience x Income	0.000	0.0002	0.94	
Service x Service chain	0.007	0.004	1.69	
Price x Service chain	-0.001	0.004	-0.23	
Convenience x Service chain	0.0001	0.003	0.02	

¹ Year and month-of-the-year fixed-effects are not shown.

***p<0.001; **p<0.01; *p<0.05

Table 5: The major findings of this study

	Major trip	Fill-in trip	Special fill-in trip
Price	n.s.	Price more important	Price more important
Service	Service less important	Service less important	n.s.
Convenience	n.s.	Convenience more important	n.s.

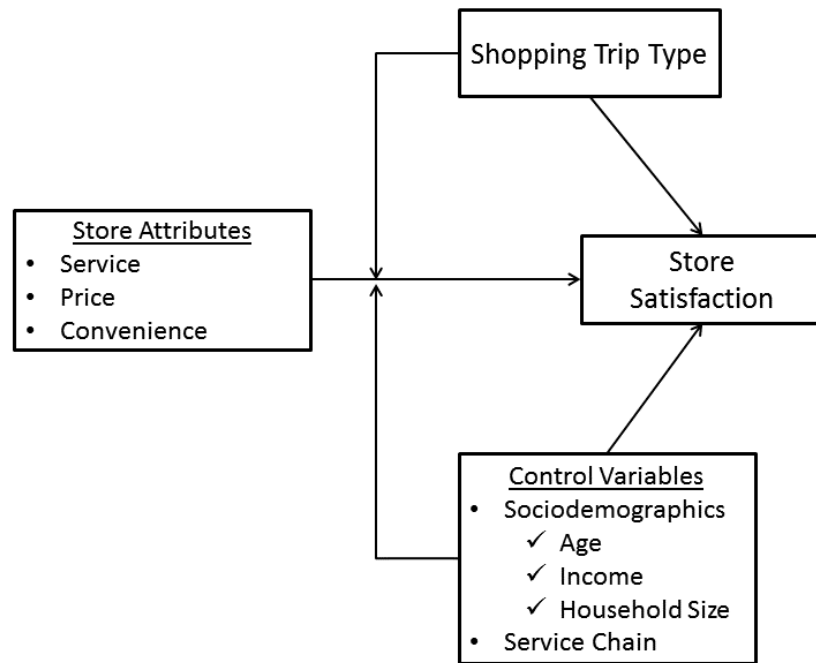


Figure 1: Conceptual model